



# **Proposed End-of-Course (EOC) Cut Scores for the Spring 2016 Test Administration**

Presentation to the Council to Establish Academic Standards  
September 26, 2016

# Agenda

- Background
- Standard Setting Process
- Proposed Cut Scores
- Invitation for Council Action

# End of Course Examinations

Nevada students, starting with the class of 2017, must take four End of Course (EOC) examinations.

- Each EOC exam measures how well a student understands the subject areas tested.
- This requirement comes from the 2013 legislative session, SB 288, NRS 389.805.
- The EOC exams will take the place of the Nevada High School Proficiency Examinations (HSPE).

EOC exams were given for the first time in the spring of 2015 and were administered in the following subjects:

- **English Language Arts I:** focus on reading comprehension
- **English Language Arts II:** focus on writing
- **Math I:** emphasis on Algebra I
- **Math II:** emphasis on Geometry
- **Integrated Math I:** emphasis on 1st course in integrated sequence
- **Integrated Math II:** emphasis on 2nd course in integrated sequence

# Requirements by Cohort

Test	Classes of 2017 & 2018	Class of 2019	Classes of 2020 and Beyond
ELA I	Participate	Pass	—
ELA II	Participate	Pass	—
ELA (Combined)*	—	—	Pass
Math I or Int. Math I	Participate	Pass	Pass
Math II or Int. Math II	Participate	Pass	Pass
Science*	—	—	Pass

# Standard Settings

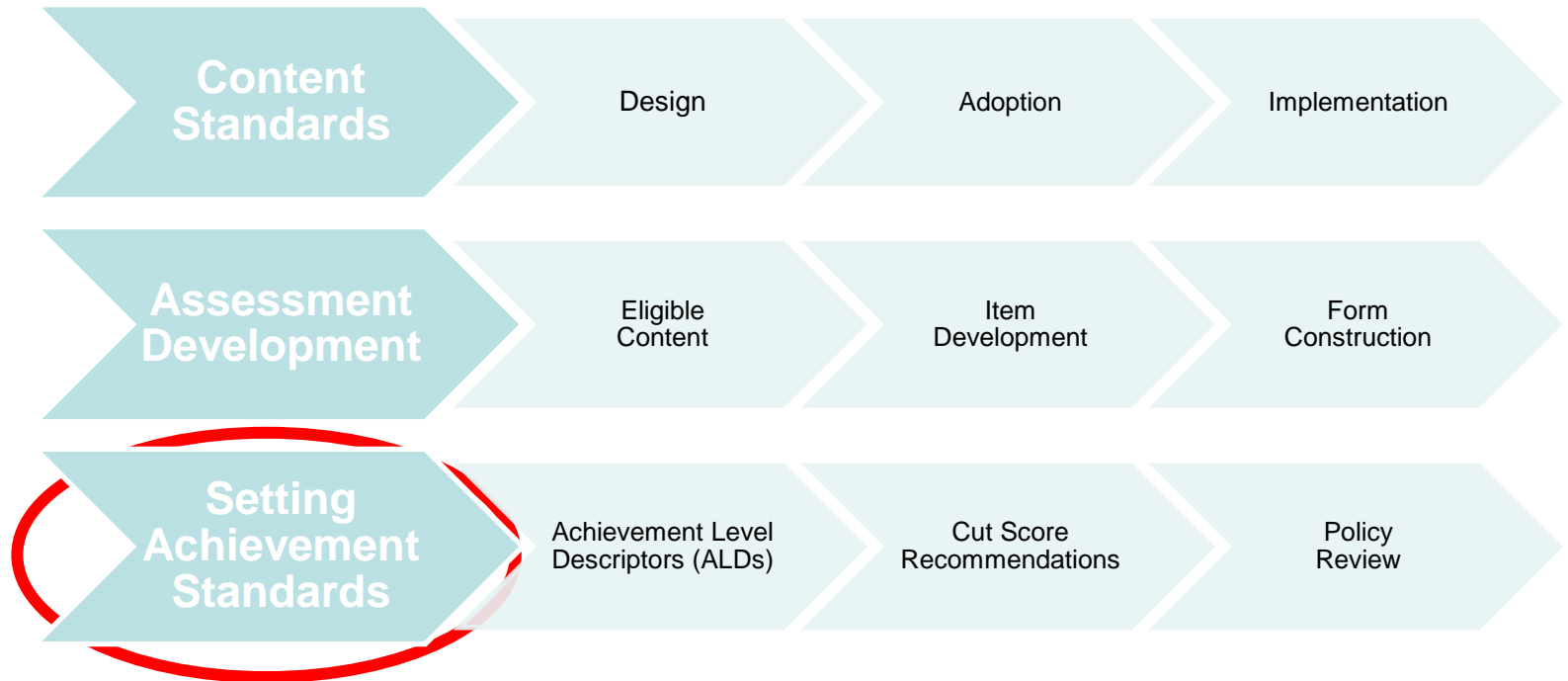
## 2015 Standard Settings

- In late 2015 and early 2016, *standard settings* were conducted to recommend *cut scores* on the EOC tests given in Spring 2015.
  - These cut scores were designed to be used only on the 2015 tests.
  - The cut scores were approved by the Academic Standards Council.
  - The cut scores were not approved by the State Board of Education.

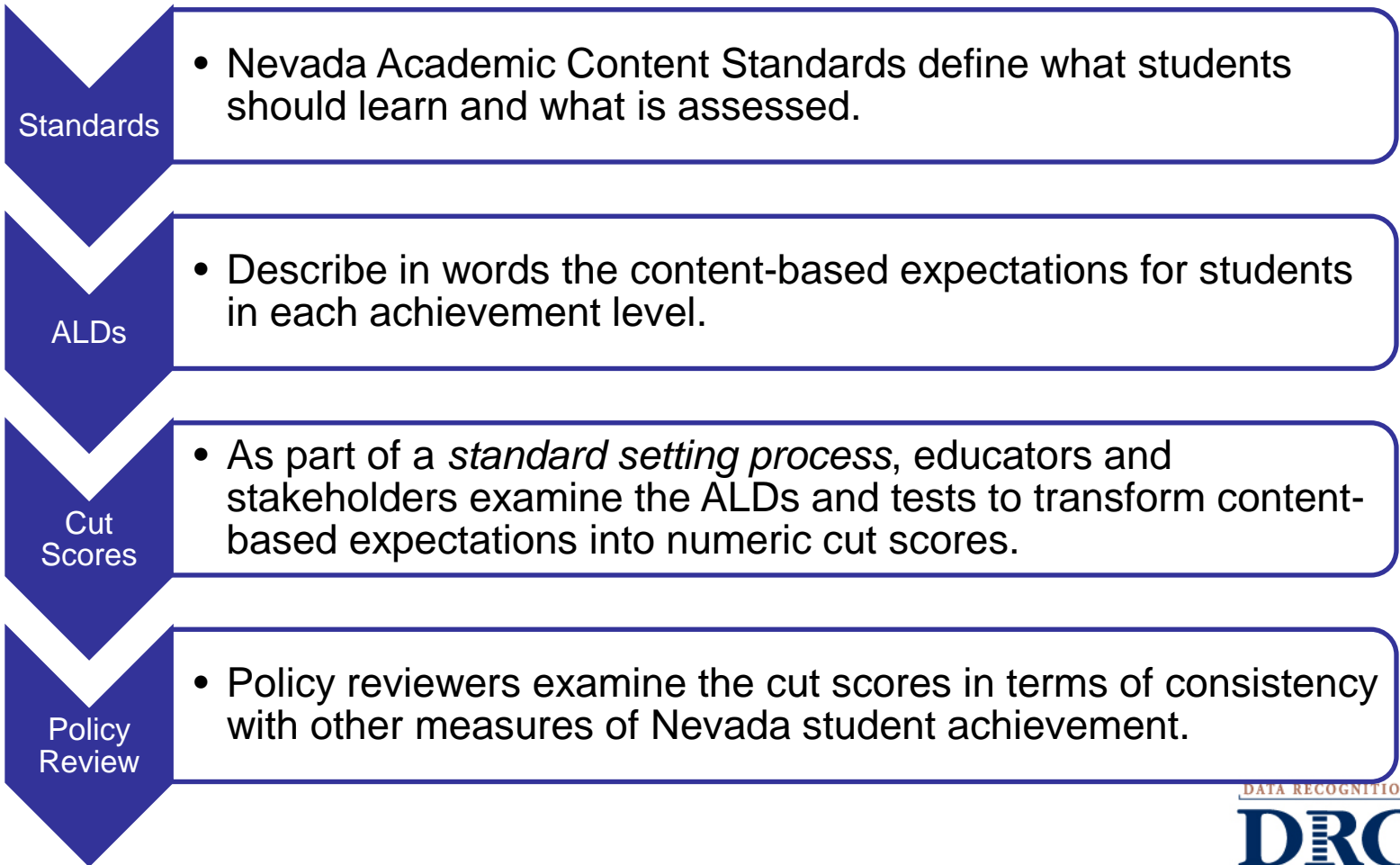
## 2016 Standard Setting

- In August 2016, a new standard setting was conducted to recommend cut scores for the EOC tests.
  - These cut scores were based on the data from the 2016 administration of the EOC tests.

# Standard Setting as Part of a Process



# Content- & Policy-Based Process



# Spring 2016 Administration

- Students who have taken (or are enrolled in) a course that includes the recommended standards for an EOC Exam are eligible to take that test.
- The Spring 2016 administration included 7<sup>th</sup>, 8<sup>th</sup>, 9<sup>th</sup>, and 10<sup>th</sup> graders who were eligible.



# Insights from Spring 2016

- Students who took the test in Grades 9 and 10 had no stakes: these students may not have been motivated.
  - We purposefully examined the results of the test by grade.
- Participants at the standard setting commented on the importance of aligning instruction to the complexity of the curriculum and assessment, all as aligned to the content standards.

# Recommending 2016 Cut Scores

**1**

## **Review Standards and ALDs**

Standard setting participants reviewed the Nevada Academic Content Standards.

Then they studied the achievement level descriptors (ALDs).

**2**

## **Content-Based Standard Settings**

Participants reviewed the test items.

Then they made content-based cut score recommendations using the Bookmark and judgmental policy capturing procedures.

**3**

## **Reviewing the Cut Scores**

The standard setting committee studied the impact of the cut scores on students.

Then the policy review committee considered the cut scores and made recommendations.

**4**

## **Finalizing Cut Scores**

The cut scores are now presented to the Council to establish Academic Standards for consideration.

If approved, they will be submitted for approval by the State Board of Education.

# Achievement Level Descriptors

- The ALDs were developed by Nevada educators and stakeholders.
- They reflect a sample of the knowledge and skills expected of students at each of the four achievement levels
  - Level 1 (lowest)
  - Level 2
  - Level 3
  - Level 4 (highest)

# Interpretations of Levels

## Level 1

- The student has not met the achievement standard and requires substantial and significant improvement to demonstrate the knowledge and skills needed as preparation for success in college and/or career after high school.

## Level 2

- The student has minimally met the achievement standard and may require specific and targeted improvement to demonstrate the knowledge and skills needed as preparation for success in college and/or career after high school.

## Level 3

- The student has met the achievement standard and has demonstrated progress toward mastery of the knowledge and skills needed as preparation for success in college.

## Level 4

- The student has exceeded the achievement standard and has clearly demonstrated the knowledge and skills needed as preparation for success in college.

# Standard Setting

- A process that allows experts to consider the content-based expectations for students in each achievement level, and to transform those expectations into numeric *cut scores* on the assessments.

# Committees

- Standard setting:
  - 17 participants for ELA
  - 15 participants for Mathematics
  - 47% classroom teachers
  - 38% non-teacher educators
- Policy review:
  - 6 participants
  - Comprised of Nevada educators and stakeholders
  - Three participants participated in standard setting

# Bookmark Procedure

- Implemented for ELA I, Math I, and Math II.
- Focuses on students' expected knowledge and skills for each achievement level.
- Grounded in content expertise and guided by the achievement level descriptors (ALDs)
- Item-centered method where participants determine expected performance of a student in each level for each item
  - “Should students just in *Level 3* have mastery of the content measured by this set of test items?”

# Judgmental Policy Capturing

- Implemented for ELA II.
- Also grounded in content expertise and guided by the ALDs.
- Participants considered the expectations for students in each achievement level, then associated this with the scoring rubric used for the writing prompts.
  - “For this prompt, how many points would a student just in *Level 3* be expected to earn?”
- Followed by a validation using the Bookmark Procedure.



# Policy Review

- The committee considered:
  - the ALDs,
  - the cut scores from standard setting, and
  - contextual information on how Nevada students performed on statewide tests.
- The committee's goal was:
  - to recommend a single set of cut scores, and
  - to make sure the system of achievement standards is well articulated and sends consistent signals.

# Multi-Step Process

- **Standard Setting: Content View**
  - Grounded in ALDs and content-based expectations for students in each level
  - Committee of Nevada educators and stakeholders from across the state, using their content expertise
  - Confidence in the process
- **Policy Review: Systemwide View**
  - Considered the intended effect on instruction, accountability, educator effectiveness, and policy
  - Recommend adjustments to promote cohesion and consistency of the system
  - Endorsement of the process

# Integrated Mathematics

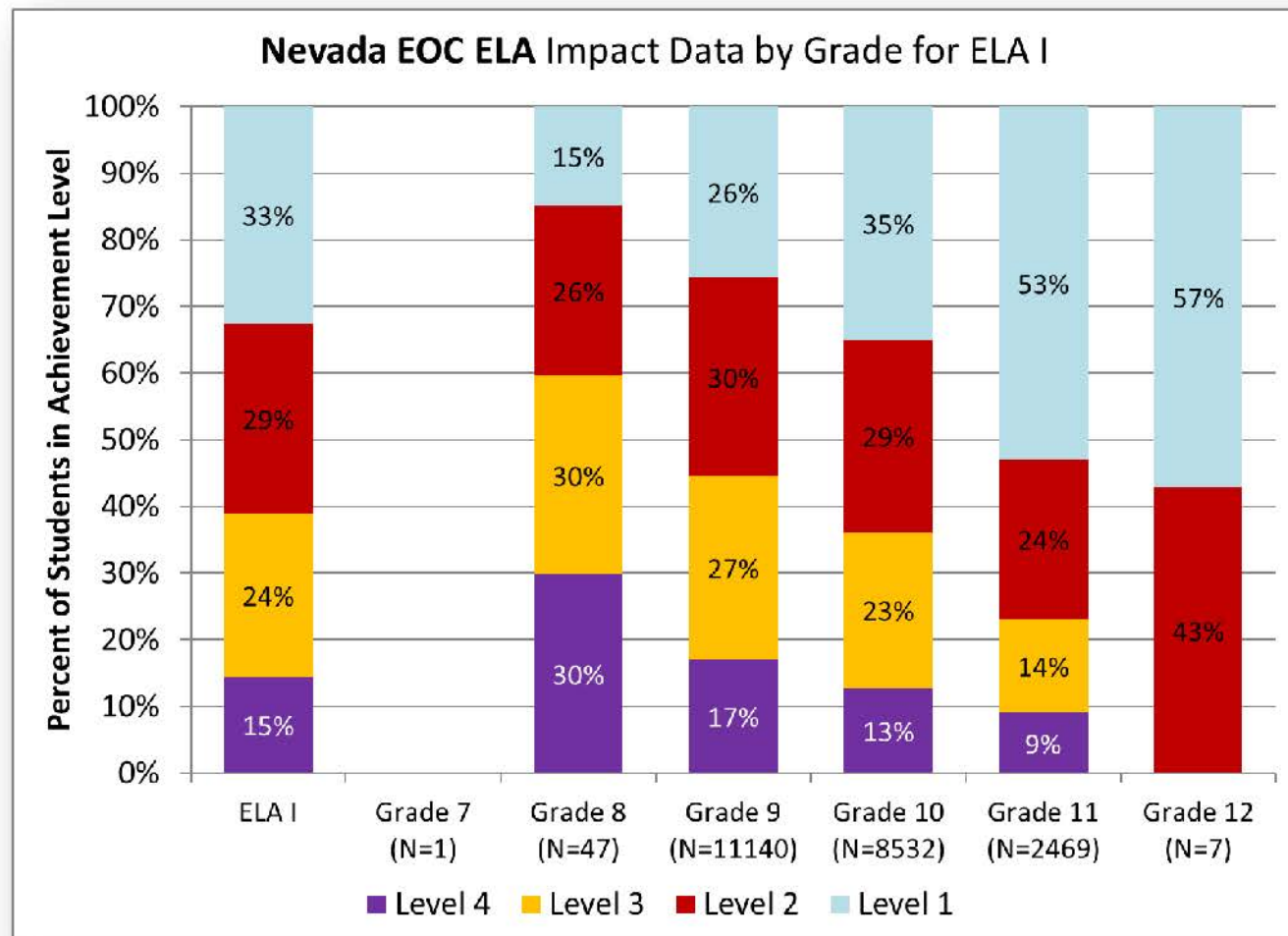
- A smaller group of students in Nevada take Integrated Mathematics.
  - These tests share common items with the EOC Mathematics tests.
- After the standard setting, these tests were analyzed.
- Cut scores for Integrated Mathematics were calculated using the cut scores for EOC Mathematics.

# Helping Interpret Cut Scores

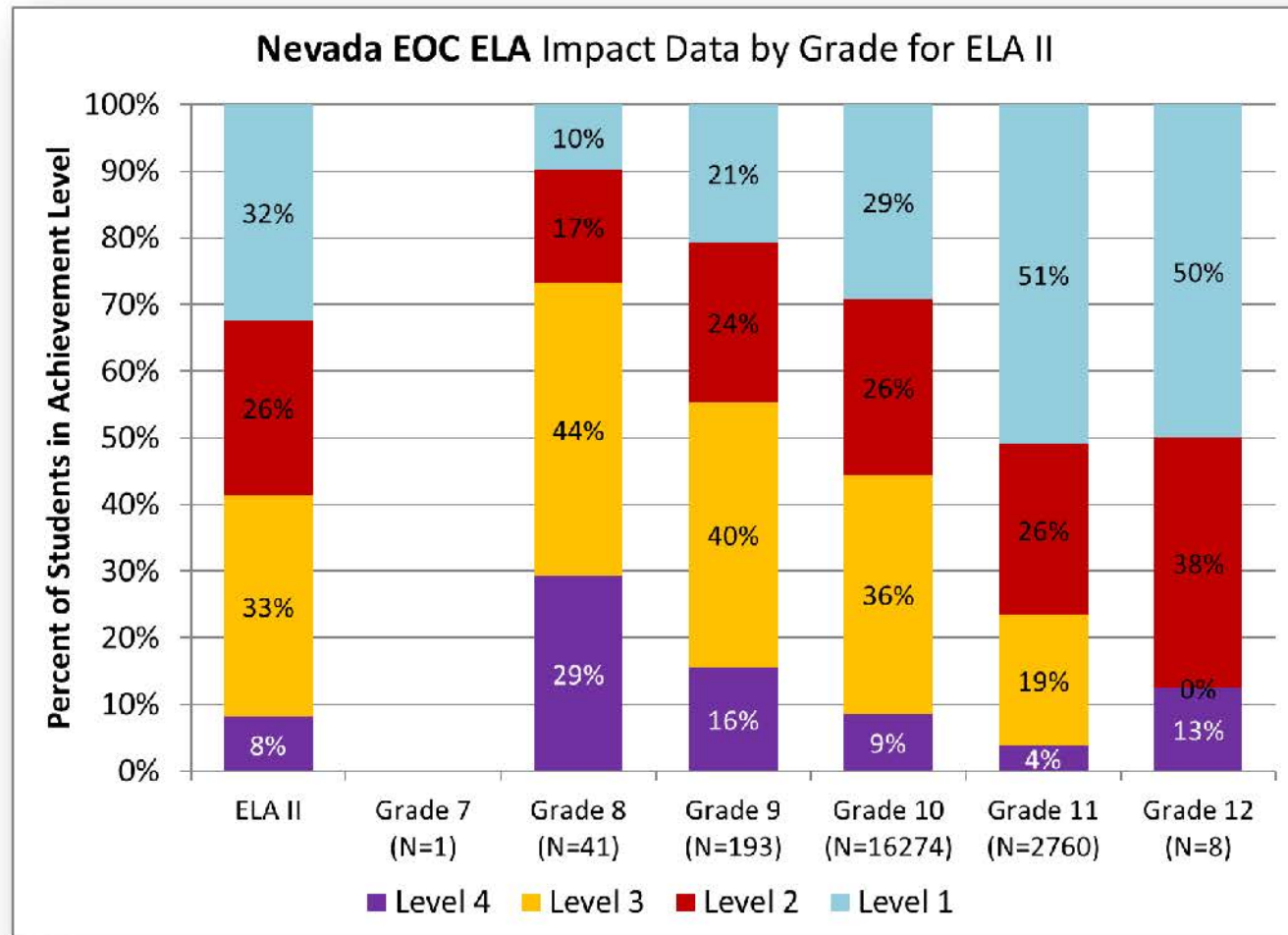
- To help the field interpret cut scores, NDE intends to use linear transformation to report test scores so that *Level 2* and *Level 3* cut scores are always the same values, regardless of test.
- For transparency, all cut scores in this presentation have *not* been transformed.

# Proposed 2016 EOC Cut Scores

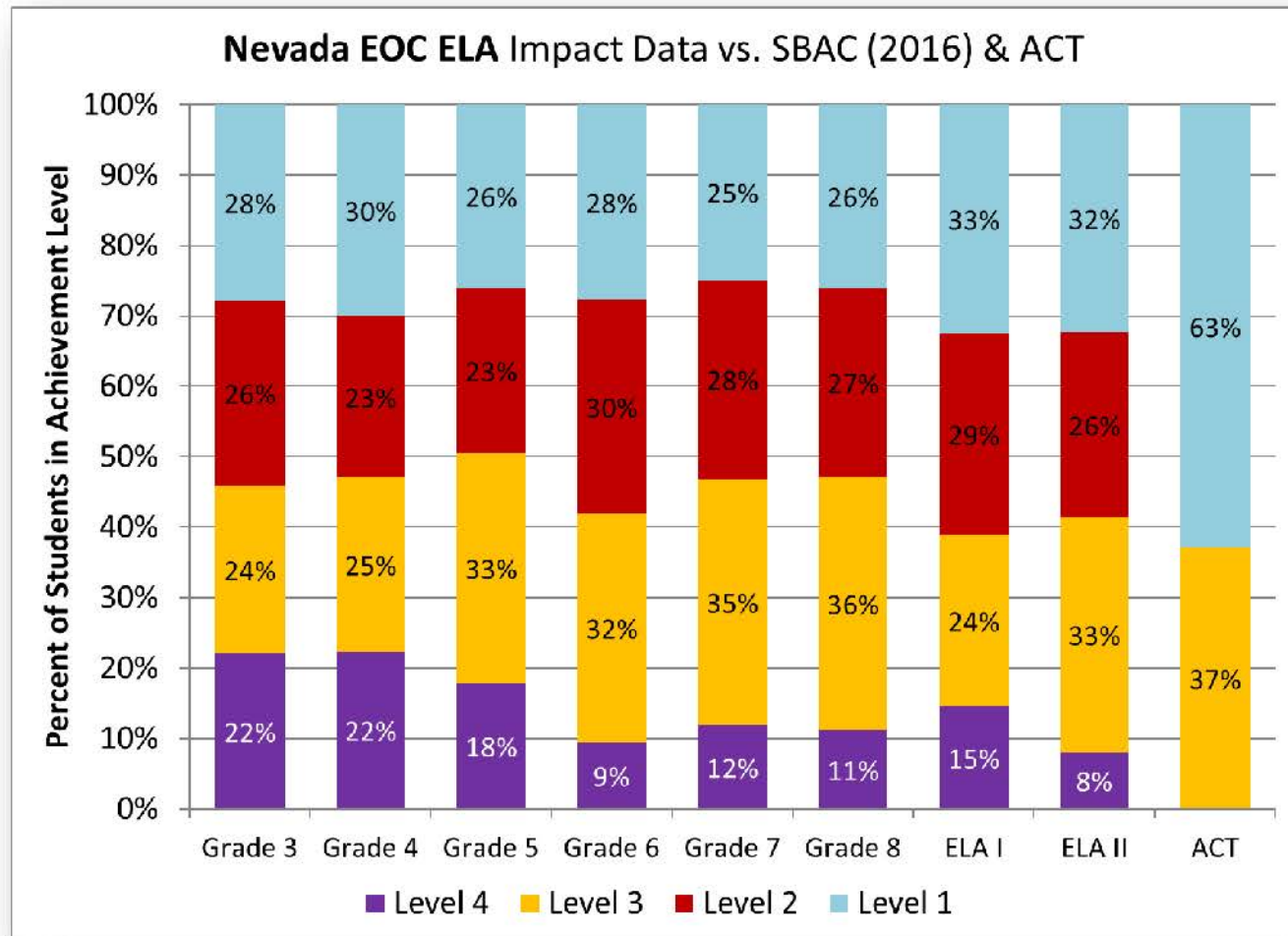
# ELA I



# ELA II

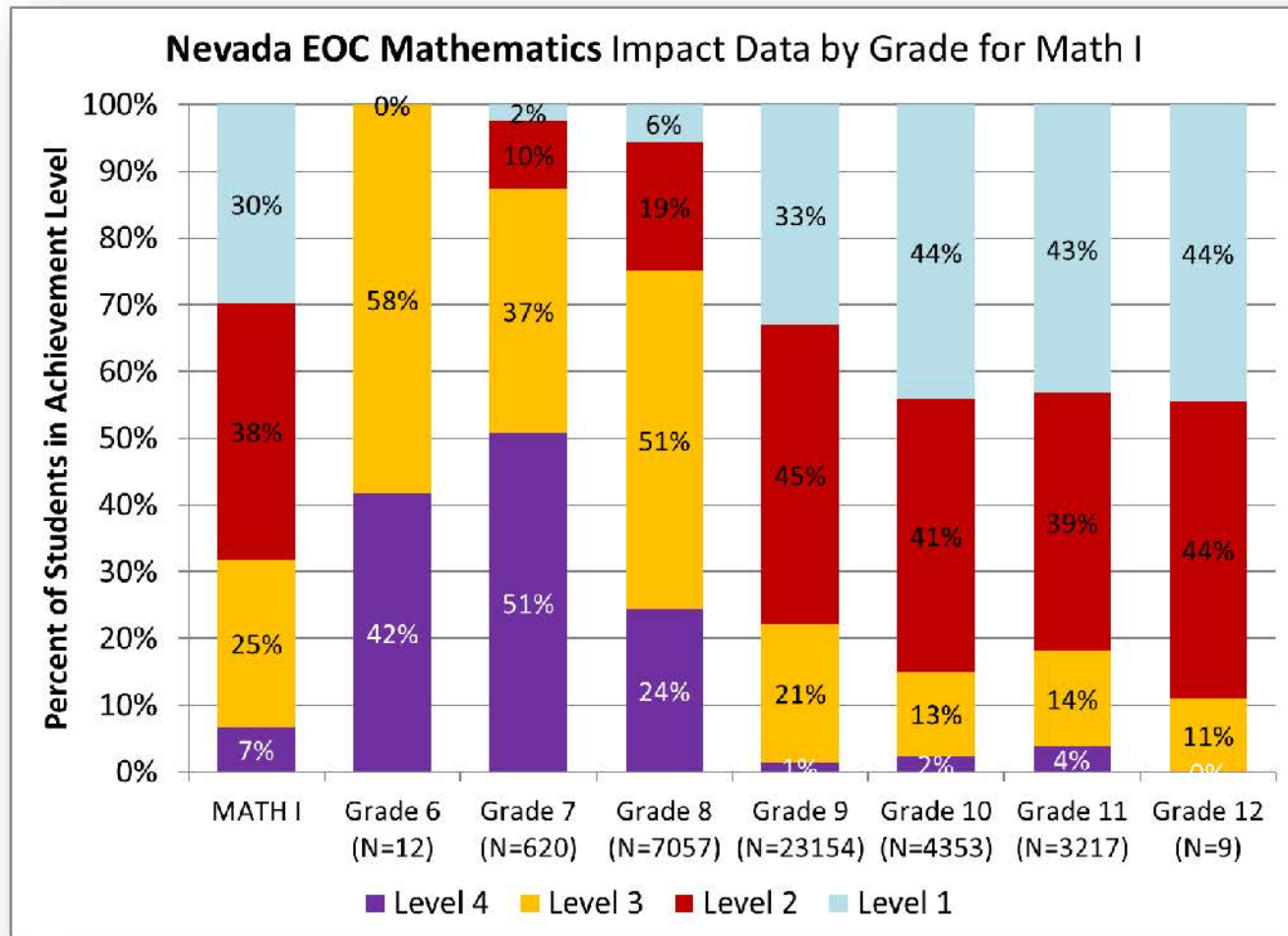


# Smarter vs. EOC vs. ACT (ELA)

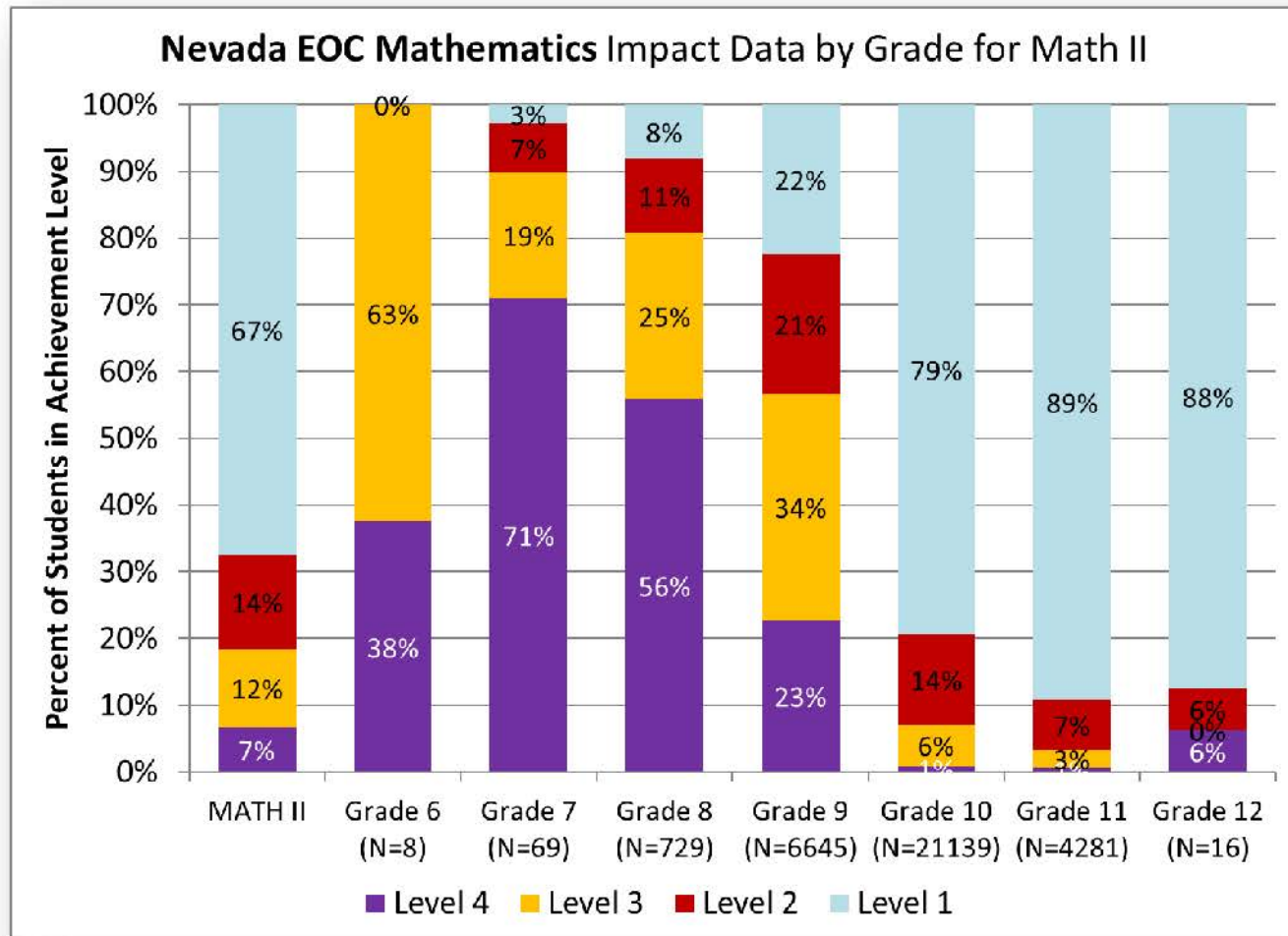




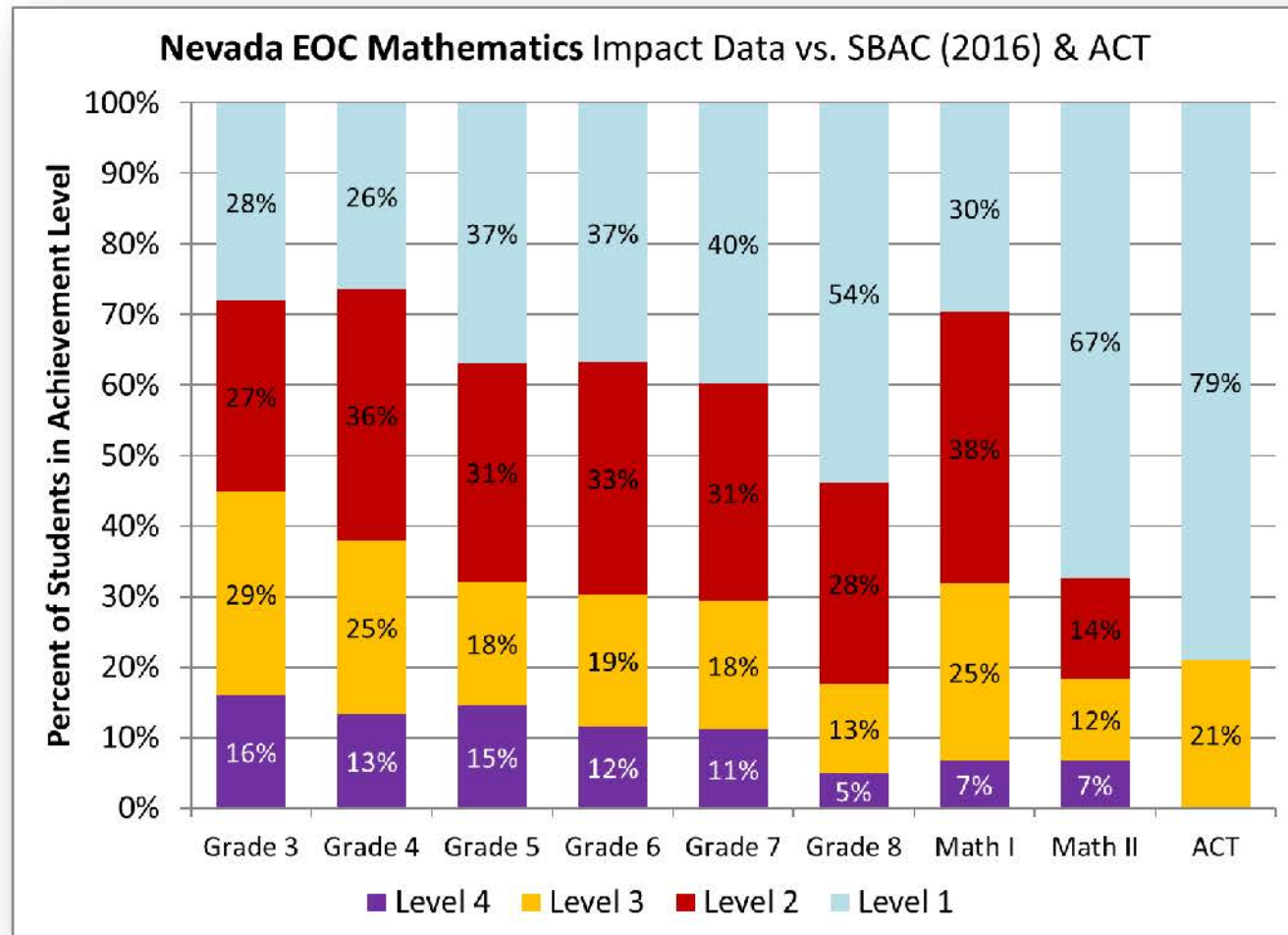
# Mathematics I



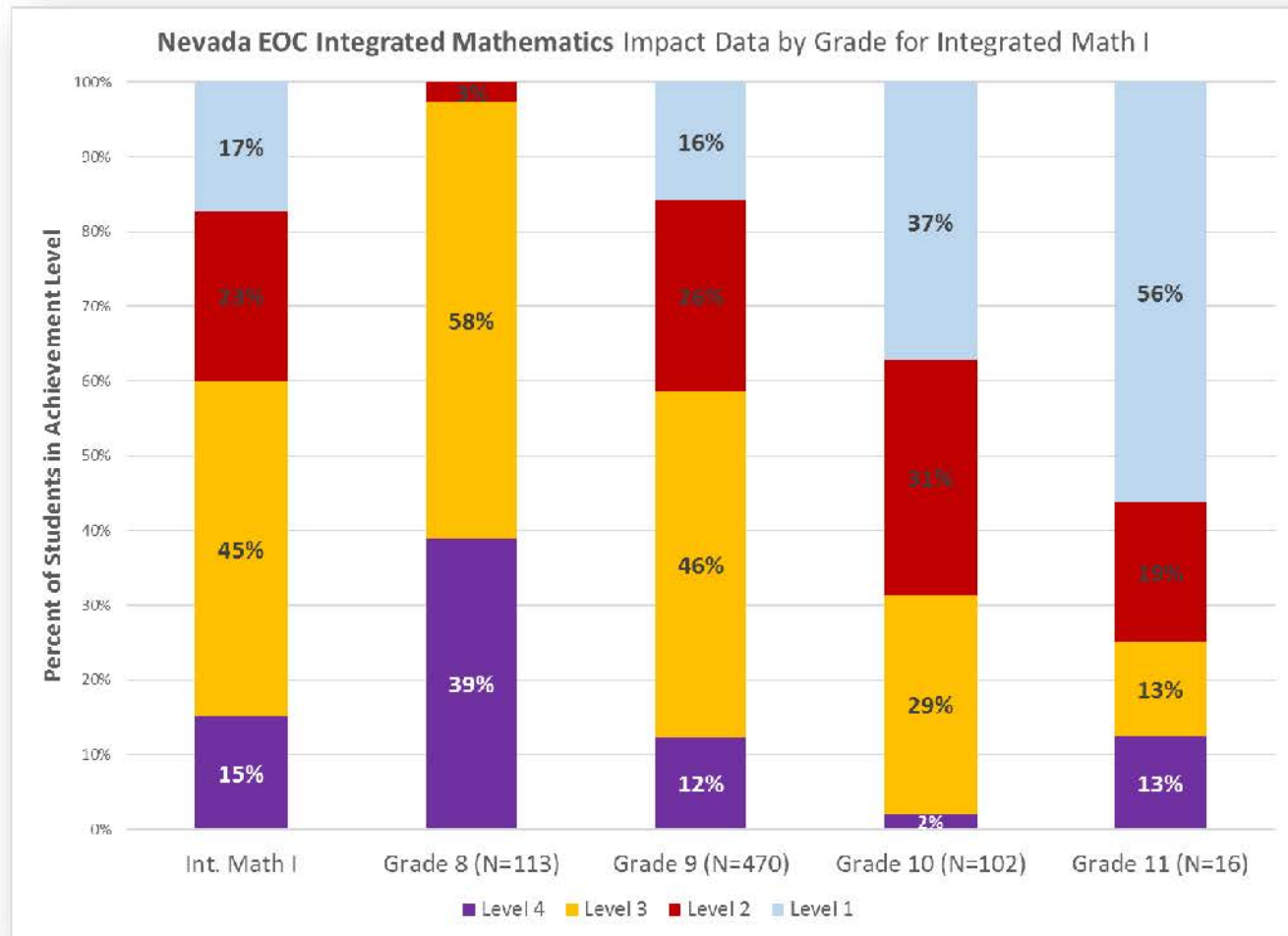
# Mathematics II



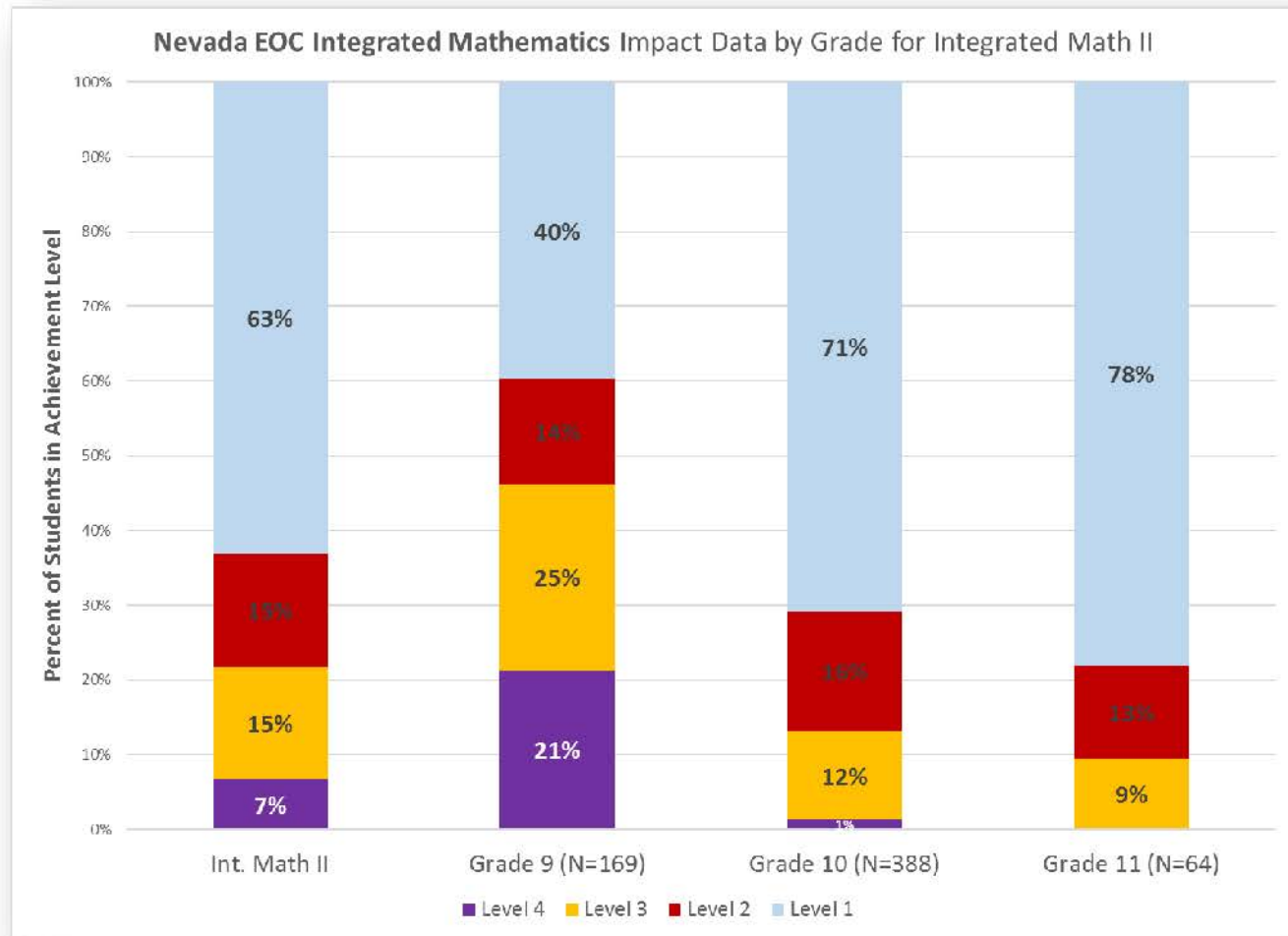
# Smarter vs. EOC vs. ACT (Math)



# Integrated Mathematics I



# Integrated Mathematics II



# Recommendations

Course	Level 1	Level 2	Level 3	Level 4
ELA I	150-383 32.5%	384-408 28.7%	409-440 24.3%	441-800 14.5%
ELA II	304-383 32.4%	384-408 26.2%	409-440 33.3%	441-500 8.1%
Math I	150-373 29.7%	374-409 38.5%	410-471 25.1%	472-800 6.8%
Math II	150-406 67.4%	407-423 14.2%	424-463 11.7%	464-800 6.7%
Int. Math I	150-373 17.3%	374-409 22.7%	410-471 44.9%	472-800 15.1%
Int. Math II	150-406 63.1%	407-423 15.1%	424-463 15.1%	464-800 6.6%

# Invitation for Possible Council Action to Approve 2016 Cut Scores for Six EOC Exams

# Final 2016 Recommendations

Course	Level 1	Level 2	Level 3	Level 4
ELA I	150-383	384-408	409-440	441-800
ELA II	304-383	384-408	409-440	441-500
Math I	150-373	374-409	410-471	472-800
Math II	150-406	407-423	424-463	464-800
Int. Math I	150-373	374-409	410-471	472-800
Int. Math II	150-406	407-423	424-463	464-800